

EUROPEAN COOPERATIVE PROGRAMME FOR THE
CONSERVATION AND EXCHANGE OF CROP GENETIC RESOURCES

IBPGR



REPORT OF A WORKING GROUP ON *PRUNUS*

(third meeting) held at the
Bildungsstätte des deutschen Gartenbaues
Grünberg, FRG
24-26 November 1988

INTERNATIONAL
BOARD FOR
PLANT
GENETIC
RESOURCES

December 1988

EUROPEAN COOPERATIVE PROGRAMME
FOR THE CONSERVATION AND EXCHANGE OF CROP GENETIC RESOURCES
(ECP/GR)

Report

of a Working Group on Prunus (Third Meeting)

held at the
Bildungsstätte des deutschen Gartenbaues
Grünberg, FRG

24-26 November 1988

ECP/GR/IBPGR
Rome, 1989

The International Board for Plant Genetic Resources (IBPGR) is an autonomous international scientific organization under the aegis of the Consultative Group on International Agricultural Research (CGIAR). IBPGR was established by the CGIAR in 1974. The basic function of IBPGR is to promote and coordinate an international network of genetic resources centres to further the collection, conservation, documentation, evaluation and use of plant germplasm and thereby contribute to raising the standard of living and welfare of people throughout the world. Financial support for the core programme is provided by the Governments of Australia, Austria, Belgium, Canada, China, Denmark, France, FRG, India, Italy, Japan, the Netherlands, Norway, Spain, Sweden, Switzerland, the UK and the USA, as well as the United Nations Environment Programme and the World Bank

Citation:

IBPGR. 1989. Report of a Working Group on Prunus (Third Meeting). European Cooperative Programme for the Conservation and Exchange of Crop Genetic Resources. International Board for Plant Genetic Resources, Rome

IBPGR Headquarters
c/o FAO of the United Nations
Via delle Terme di Caracalla
00100 Rome
Italy

CONTENTS

	<u>Page</u>
INTRODUCTION	1
REPORT	
REVIEW OF ACTIVITIES	2
Documentation	2
Review of progress in collecting	3
WORKPLAN	5
European <u>Prunus</u> data base	5
Standard varieties	7
The need for conservation systems other than field genebanks	8
<u>In vitro</u> collecting	8
Implementation of a European conservation <u>Prunus</u> network	8
Review of the existing situation	8
Minimum requirements for safe conservation of <u>Prunus</u> genetic resources	9
A European <u>Prunus</u> conservation network	9
Transfer of vegetative material within and outside Europe	11
Collaboration of the European network with other regions of the world	11
Recommendations on coordination of the European <u>Prunus</u> network after the end of Phase III	12
Other matters	12
APPENDIX I LIST OF PARTICIPANTS	13
APPENDIX II AGENDA	15
APPENDIX III LIST OF CROP COORDINATORS	16
APPENDIX IV CROP TYPE AND PLANT USE	17
APPENDIX V MINIMUM DESCRIPTION OF COLLECTIONS	18
APPENDIX VI LIST OF REFERENCE VARIETIES	19
APPENDIX VII THE EXISTING SITUATION IN EUROPE	23
APPENDIX VIII LIST OF NOMINATED NATIONAL FRUIT TREE GERMPLASM LIAISON OFFICERS	25

INTRODUCTION

The third meeting of the Prunus Working Group was convened in the Bildungsstätte des deutschen Gartenbaues, Grünberg, FRG, 24-26 November 1989 to review progress with crop catalogues, to issue a plan of action for the remaining year of Phase III of the ECP/GR, and to consider the modalities for the implementation of a European Prunus network, with the objective of ensuring the long-term maintenance of European Prunus collections which hold indigenous and other irreplaceable material.

Mr. P.M. Perret, ECP/GR Officer, viewed the major events since the second meeting of the Prunus Working Group in Florence, Italy, 22-24 October 1985. One of these was the convening of the third meeting of the Technical Consultative Committee in Reykjavik, Iceland, 17-19 December 1985. The TCC established the basis for Phase III of the ECP/GR (1987-1989) and, with respect to the future of the Prunus Working Group, recognized that the publication of complete catalogues of passport/characterization/evaluation data as proposed by the second meeting of the Prunus Working Group would be a milestone in the activities of the Working Group. It recommended that the Working Group encourage more study on variation patterns and wild species, including in situ studies, of the Prunus genepool. The ECP/GR Officer outlined that the third meeting should be dedicated to discussions on ex situ collections in view of the scope of the problems, but he itemized specific actions (and projects) of the ECP/GR Secretariat for wild species.

The list of participants is provided in Appendix I. Drs. Kunev, Tréfois and Fischer had sent their regrets for being unable to attend. The Turkish authorities had been invited by the ECP/GR Secretariat to nominate an expert for the meeting but, unfortunately, no reply had been received. The Working Group unanimously elected Prof. H. Schmidt as Chairman. The Agenda of the meeting was adopted and is provided in Appendix II.

REPORT

REVIEW OF ACTIVITIES

Documentation

1. Dr. S. Blixt, Head of Material at Nordic Gene Bank, as representative of the European Prunus data base (EPDB), provided the meeting with printouts of a draft European inventory. This did not include any additional passport data, nor characterization/evaluation data as recommended by the second meeting. Furthermore, it appeared that a few amended basic passport data, which had been sent to the European Prunus data base by Crop Coordinators, had not yet been included. Dr. Blixt explained why they had been unable to fully realize their commitments for the European Prunus data base (staff shortages and resignation, software changes, etc.). Nonetheless, he assured the meeting that the Nordic Gene Bank was now in a position to provide the necessary staff and facilities for an accelerated development of the EPDB.
2. Diskettes containing the data published in the first edition of the European Prunus catalogue (basic passport data) had been sent from the EPDB to Crop Coordinators in February 1988. This was with the intention to implement regional crop data bases in agreement with the recommendations of the second meeting. It was noted that Dr. Grasselly, the almond coordinator for Western countries, as well as Dr. Gülcan, the apricot coordinator for Eastern countries and Turkey, had already established, in 1987, comprehensive computerized data bases including additional data requested at the second meeting. Other Crop Coordinators have not been able to establish computerized crop regional data bases due to diverse constraints.
3. The Working Group made a detailed review of achievements in data collating since the second meeting. The almond coordinator for Western countries (Dr. Grasselly) had a good set of data from 6 institutes from 4 countries (total 112 accessions). The apricot coordinator for Eastern countries and Turkey (Dr. Gulcan) had collated quite complete data from 10 institutes in 6 countries (503 accessions). The peach coordinator for Eastern countries (Ing. Kalasek) provided the EPDB with data from 4 countries (the 140 accessions from Czechoslovakia were fully documented),

whereas for Western countries only complete data from Italy were available. Concerning plum, Czechoslovakia (70 accessions), Yugoslavia (65 accessions) and Italy had provided comprehensive additional data. These lists emphasized indigenous varieties. Members noted that these achievements could not be considered too impressive, but it was noted that, in the case of cherry, almonds and apricots, the results should not be underestimated; indeed the total number of described accessions represents roughly more than 50% of the indigenous material registered in the data base. The Working Group was of the opinion that publication of these results in crop catalogues will greatly enhance the input of further data.

4. The meeting was informed that the coordinators in Western countries for peach (Dr. Bellini), apricot (Dr. Guerriero) and plum (Dr. Cobianchi) had requested to be relieved of their responsibilities. In addition, it was recognized that, in default of a clear statement from the Turkish government on its support for the activities of the apricot coordinator (Dr. Gulcan), the latter may be unable to continue this task.

5. The meeting felt that in view of the immediate action which is required for publication of crop catalogues, it would not be advisable, at this stage, to nominate Crop Coordinators unfamiliar with the work and objectives of the Working Group. Therefore it was agreed that Ing. Kalasek and Prof. Spiegel-Roy would assume, for the near future, the responsibilities of apricot coordinator, that Profs. Schmidt and Paunovic and Ing. Kalasek would continue their task as Crop Coordinators for all Europe, respectively for cherry, plum and peach. The revised list of Crop Coordinators is provided in Appendix III.

Review of progress in collecting

6. Actions concerning the recommendations of the second meeting in 1985 for collecting activities are listed below:

Spain: Some surveys on sweet cherry have been carried out. The maintenance of this material in in situ conditions is guaranteed for many years.

Greece: An IBPGR-supported project, initiated in 1984, was continued in 1986 and several cultivars had been collected.

Turkey: No information was available on progress with wild apricot and almond collecting.

Other collecting and propagation activities had been carried out in:

France: Peach: Work was done by the Station de Recherches Fruitières Méditerranéennes de l'INRA, Montfavet and the the Conservatoire Botanique de Porquerolles (CBP). 192 accessions were collected largely in the region Rhône-Alpes (southeast France). Evaluation and description have started. Some of these cultivars are maintained in local collections in their areas of origin by private associations.

Old cultivars have been collected in the region Provence-Alpes-Côte d'Azur (PACA).

Almond: Two missions were carried out in Averon and PACA regions (central and southwest France) by private associations.

Plums: A collection of P. domestica was organized in Moselle (E France).

Czechoslovakia: Collections of cherry and apricot had been accomplished and a programme on plum is initiated.

Nordic countries: Collecting of P. avium (by means of seeds) continues in Sweden, Denmark and Norway and an evaluation of seedlings has been started.

Poland: P. fruticosa and P. mahaleb germplasm has been collected.

Yugoslavia: Collecting of wine peaches and autochthonous apricots were undertaken in Serbia and Vojvodina.

WORKPLAN

European Prunus data base

7. The Working Group reaffirmed that its activities were orientated towards genetic resources of Prunus. It was re-stated that the characterization and evaluation descriptors selected at the second meeting would be registered only for local germplasm and exotic non-commercial cultivars and rootstocks (some old interesting material is still commercialized but should be considered as genetic resources). It was agreed that passport data for commercial cultivars and breeder's lines (on condition that they are available for free exchange) would still be included in the data base, but that they would appear in the crop catalogues in separate sections.
8. The Working Group agreed that the actual registration of data into the EPDB should be limited to the set of passport, characterization and evaluation data which was recommended by the second meeting. However, it was recognized that, in future, an increase in the number of descriptors to be registered by the EPDB or the registration by EPDB of all available data will have to be considered.
9. Many members were dissatisfied with the crop categories defined earlier for the EPDB, as it is difficult for users of the catalogue to trace back accessions of related species to a specific crop. Improvements were agreed and the new crop categories are provided in Appendix IV.
10. The meeting had a lengthy discussion on the advantages and disadvantages of Crop Coordinators acting as intermediaries between Curators and the EPDB. It was recognized that their assistance is absolutely essential (corrections of misspelling, identification of faulty data, etc.). However, it was spelled out that a direct link between the Curator and the EPDB would allow the speeding up of the registration of data and render the full system more transparent and rational. Curators would also feel responsible and fully involved, as direct contributors, in the process of the registration and exchange of data. There was a general agreement that flexibility was a prerequisite to further progress. The role of a National Fruit Tree Germplasm Liaison Officer with knowledge of Prunus, who is able to activate and promote the objectives of the Working Group within his country, is also considered vital (see paras. 22 and 23).

11. In view of para. 10, the following plan of action was agreed:
 - A. The NGB, as EPDB with the active support of Crop Coordinators, will include in its draft list all additional data which had been received (see para. 3) and will correct the printouts, where necessary, by January 1989 at the latest.
 - B. By February 1989 contributors will receive from the EPDB in the form of printout all the data which they have sent. Simultaneously the NGB will send draft crop catalogues to the respective crop coordinators and the six crop catalogues to each National Fruit Tree Germplasm Liaison Officer.
 - C. Contributors will be requested to proofread and complete data on the received printouts and to return them to the EPDB by April 1989. Crop Coordinators as well as National Fruit Tree Germplasm Liaison Officers are expected to mobilize support either by contacting Curators in their countries (national coordinators) or by contacting colleagues in other countries (Crop Coordinators). Crop Coordinators will continue to assess the data and propose amendments.
 - D. NGB will publish a first edition of the crop catalogues at the latest by early August 1989 and distribute them.
 - E. NGB, Curators, National Fruit Tree Germplasm Liaison Officers and Crop Coordinators will follow the same process as described above with the aim of publishing further editions of extensive crop catalogues as early as possible.
12. The meeting recommended that National Fruit Tree Germplasm Liaison Officers (see para. 22) be responsible for contacting Curators of collections in their countries, who do not yet collaborate with the Prunus Working Group, e.g. private and semi-private associations. It also recommended that the EPDB prepare a specimen of the crop catalogues with a standard letter; this documentation could be sent by national fruit tree germplasm liaison officers to all Curators not yet participating.

13. In order to permit the most meaningful comparisons of characterization/evaluation data between collections, the Working Group recommended that each Curator provide a brief description of the ecoclimatological conditions of the location of the collections as well as on cultural practices. This brief description will be included in the crop catalogues. A format for this description was agreed and is provided in Appendix V.

Standard varieties

14. The Working Group felt the need to define a set of standard varieties for each crop. These would allow the comparison in a meaningful way of characterization/evaluation data between accessions and locations/countries. It would also facilitate the sorting out of duplicates within and between collections. Members agreed that standard varieties should be selected mainly on the basis of their wide adaptability/plasticity. Consequently, a list of reference varieties was finalized (Appendix VI). The Working Group recommended that Curators of small collections include in their orchards at least one of these standard varieties for each crop and that Curators of larger collections include the full set of these standard varieties. It was further recommended that only one originator distribute virus-free clones for each standard variety, so that comparisons can be made using the same material all over Europe. Accordingly, a list of Curators, which will be responsible for the distribution of virus-free clones of these reference varieties, was agreed. This list is provided in Appendix VI. As all Curators have already agreed to distribute this material, holders of collections will be invited to request these varieties to the respective Curators as soon as possible.
15. The members recommended again that Prunus genetic resources be described in accordance with the descriptors of the CEC-IBPGR Prunus Descriptor lists. Members considered that these descriptor lists were of high quality and confirmed that these were each year adopted by an increasing number of Curators/breeders. Some criticisms, however, were raised specifically of a few of the plum descriptors. It was agreed that further exchange of opinions should take place during 1989 between plum breeders and Curators about this descriptor list especially at the opportunity of a Plum Genetics and Pomology Symposium (Pont-de-la-Maye, July 1989) and a Symposium on Culture and Apricot Decline (Caserta, Italy, July 1989). If there is a consensus for modifications, then IBPGR should consider revising the plum descriptor list in 1990.

The needs for conservation systems other than field genebanks

16. The participants agreed on the need to use complementary methods of conservation other than orchards. Apart from seed storage, cryopreservation of meristem/embryos was mentioned as interesting possibilities which could preserve clones, and these deserve more research in order to have routine procedures available. Specific mention was made of somatic embryos from leaf explants. Pollen conservation was also cited, especially as a method of conservation which allows direct use of genetic resources by breeders. It was explained that these methods of conservation cannot substitute field genebanks but only complement them.

In vitro collecting

17. Dr. K. Elias, IBPGR Intern, gave information on the IBPGR research carried out in the Istituto Agronomico Mediterraneo, Valenzano, Italy. This approach is in connection with quarantine and disease indexing procedures. It was emphasized that in vitro collecting methods are not proposed as a routine alternative to conventional methods but as a supplementary technique which will be useful for transfer of material. Participants welcomed this initiative and wished to be informed of results.

Members recommended that further collecting be undertaken in Greece. The meeting did not identify any other major and obvious threat to genetic resources.

Implementation of a European conservation Prunus network

Review of the existing situation

18. Questionnaires had been distributed in September 1988 by the ECP/GR Secretariat to review the diverse existing structures for conservation in European countries. A summary of the 18 replies which have been received is provided in Appendix VII.

Prof. Schmidt gave to the meeting detailed information on the situation of a collection held by the Justus-Liebig University of Giessen. This collection includes about 2500 interspecific cherry crosses including species like P. avium, P. cerasus, P. fruticosa, P. canescens, P. concinna, P. incisa, P. nipponica, P. subhirtella, etc. This collection is widely known among breeders and specialists interested in genetic variability as a unique and irreplaceable collection. It is a potential source of disease resistance, quality characters and rootstocks. Unfortunately, this collection is now in danger of being dug up due to a number of constraints. The members unanimously agreed that all possible measures should be taken to prevent such a disaster. It was proposed that a resolution requesting the maintenance of this collection be circulated for signature to all European fruit tree specialists. Finally, the Working Group requested that IBPGR contact the ad hoc authorities in the Federal Republic of Germany, to explain the importance of this collection and to advocate its maintenance.

Minimum requirements for safe conservation of Prunus genetic resources

19. The meeting agreed that the existing situation in Europe (see Appendix VII) was highly dangerous and that we were approaching a point of no return, in which most valuable genetic variability would be irretrievably lost in ex situ collections if energetic action was not taken. The Working Group emphasized that the conservation of accessions in two locations with two trees per location was the absolute minimum. Some members from northern European countries thought that this minimum was insufficient in their countries because of the danger of damage from low temperatures.

A European Prunus conservation network

20. The Working Group agreed that the only viable solution for implementation of a European fruit tree conservation network was to obtain from governments long-term commitments for the maintenance, evaluation and free distribution of their indigenous genetic resources material.

21. In consideration of the above, the Working Group requested the EPDB to prepare, by August 1989, lists of original material held in ex situ collections which have been registered so far for each country in the EPDB. It then requested the ECP/GR Secretariat to present these lists to Government Representatives at the Technical Consultative Committee (TCC). The Working Group recommended that the TCC explain to Governments that their commitments for conservation of this material is a prerequisite for the future of a Prunus network. It was outlined that this should be a continuous process. Any further collaborative efforts of Prunus specialists through the Prunus Working Group would be of minor significance without these Governmental commitments. It was also stressed that these commitments had obvious financial implications which should not be passed over, when the TCC will formulate its recommendations to the Governments.

22. The Working Group noted with satisfaction that National Fruit Tree Germplasm Liaison Officers had already been nominated in many countries (Appendix VIII). Members recommended that the ECP/GR Secretariat contact again all Governments which have not yet nominated such a person and that, if possible, a final list be ready or completed at the time of the TCC.

23. Members agreed that Liaison Officers have the primary task to ensure that the liaison between the national fruit tree germplasm collections and the European network (EPDB, Chairman of the Working Group, etc.) is operational. For example, it is the responsibility of the Officers to immediately inform the network through its Chairman and the EPDB of any danger of the eradication of a genetic resources collection. It was recommended that the Officers be responsible at an international level not only for ex situ collections but also for in situ conservation of fruit trees, as both are linked and complementary. Members outlined that it would be unrealistic to recommend standardized structures in each country. Obviously the hierarchical position of the Liaison Officers would differ from country to country, but this does not matter as long as they are recognized by the Government as being responsible for the international liaison of technical matters on fruit tree genetic resources.

24. Similarly, the schemes for the responsibilities for maintaining collections will vary depending on the country. However, the meeting strongly recommended that within each country the appropriate authority assign field genebank responsibility to particular institutes/collections. It recommended that each holder of fruit tree genetic resources sign a document that he will maintain his original material (see para. 20) with at least 2 trees per accession.
25. The mandate of the Prunus Working Group is by nature confined to Prunus species. Nevertheless, the members should refer to National Fruit Tree Germplasm Liaison Officers as they feel that their recommendations can and should apply to all fruit trees.

Transfer of vegetative material within and outside Europe

26. The Working Group stressed that it would be financially unrealistic to attempt to keep all genetic resources collections virus free. Nevertheless, it was recognized that all necessary precautions should be applied in the transfer of vegetative material within and outside Europe. In this context the members welcome the FAO/IBPGR programme on technical guidelines for the safe movement of germplasm. Fears were expressed that such guidelines might slow down the exchange of fruit tree material, but it was also recognized that the problem of safe exchange needs to be addressed in the near future, especially at an international level.

Collaboration of the European network with other regions of the world

27. The Working Group agreed that the EPDB should distribute the crop catalogues to Curators and interested specialists all over the world. It was hoped that Curators of collections will reciprocate by sending their inventories/files of their data bases. It was outlined that international collaboration should not be confined to exchange of data,

but should be extended. As an example, it was recalled that many European Curators had volunteered to act as temporary depositories of fruit tree accessions which resulted from the USDA-IBPGR fruit tree collecting mission in Pakistan. Furthermore, it was hoped that Curators from outside Europe will adopt as reference varieties some of the ones recommended for the European network.

Recommendations on coordination of the European Prunus network after the end of Phase III

28. The meeting considered at length the possibilities for a self-sustaining network by the end of Phase III (December 1989). The Working Group recommended that IBPGR should continue to provide a coordinating link within its Headquarter for the European Prunus network at least for a few more years. The absence of such a coordinator, posted in an international non-political organization such as IBPGR, would seriously hamper the development of the network. It was also stressed that funds should be planned by Governments for a further meeting of National Fruit Tree Germplasm Liaison Officers in 1990. Without this meeting the Working Group considered that 7 years of effort (1983-1989) were at risk.

Other matters

29. A few members proposed that a mechanism be devised by the EPDB for recording gene symbols and results of theses, breeder's papers and scientific works on identification of major genes. They pointed out that numerous valuable research findings were not published and therefore were being ignored. Other members added that such a mechanism for gene recording in the EPDB would be of great interest considering the probable expansion in the future of gene transfers and genetic manipulations. It was agreed that this should be discussed at the next meeting.
30. The Working Group emphasized that in situ aspects of Prunus conservation were absolutely complementary to ex situ collections. It was recommended that a meeting, including botanists, experts in genetic variability of fruit trees and breeders, be convened during 1989 by the ECP/GR Secretariat to discuss possible action and coordination at the European level.

LIST OF PARTICIPANTS

Chairman

Prof. H. Schmidt
Federal Research Centre for
Horticultural Plant Breeding
Bornkampsweg
2070 Ahrensburg
FRG

Participants:

Dr. J. Blazek
Research Institute for Fruit
Growing and Breeding
507 51 Holovousy
CZECHOSLOVAKIA

Ing. S. Kalasek
Ustredni Kontrolni Zksebni
Ustav Zemedelsky (UKZUZ)
64443 Zélisice u Brna
CZECHOSLOVAKIA

Prof. R. Bernhard
Station de Recherches d'Arboriculture
Fruitières
INRA
La Grande-Ferrade
Pont-de-la-Maye
33140 Villenave d'Ornon
FRANCE

Dr. Ch. Grasselly
Station de Recherches Frutieres
Mediterranéennes
INRA
Domaine Saint-Paul
84140 Montfavet
FRANCE

Dr. I. Hatziharisis
Pomology Institute
Imathias
59200 Naoussa
GREECE

Dr. J. Apostol
Research Institute for Fruit &
Ornamental Plant Production
Pf. 108
XXII Park u. 2
1775 Budapest
HUNGARY

Prof. R. Spiegel-Roy
Institute of Horticulture
Volcani Center
P.O. Box 6
Bet-Dagan
ISRAEL

Dr. A. Liverani
Istituto Sperimentale per la
Frutticoltura
Piazzale della Vittoria 15
47100 Forli
ITALY

Assistant Prof. Dr. Z.S. Grzyb
Research Institute of Pomology and
Floriculture
Ul. Pomologiczna 18
96-100 Skierniewice
POLAND

Dr. R. Socias i Company
Diputación General de Aragón
SIA
Unidad de Fruticultura
Apartado 727
50080 Zaragoza
SPAIN

Prof. I. Fernqvist
Department of Pomology
College of Horticulture
The Swedish University of
Agricultural Sciences
250 53 Alnarp
SWEDEN

Dr. S. Blixt
Nordic Gene Bank
P.O. Box 41
230 53 Alnarp
SWEDEN

.../...

Dr. M. Kellerhals
Swiss Federal Research Station
for Fruit-Growing,
Viticulture & Horticulture
CH-8820 Wädenswil
SWITZERLAND

Dr. K.R. Tobutt
East Malling Research Station
Maidstone
Kent ME19 6BJ
UK

Prof. S.A. Paunovic
University of Svetozar Markovic
Faculty of Agronomy
Dept. of Horticulture
Cara Dusana 34
32000 Cacak
YUGOSLAVIA

ECP/GR/IBPGR

Mr. P.M. Perret
IBPGR
c/o FAO
Via delle Terme di Caracalla
00100 Rome
ITALY

Dr. K. Elias
IBPGR Intern
Istituto Agronomico Mediterraneo
Via Ceglie 23
70010 Valenzano (Bari)
ITALY

Members unable to attend:

Dr. Boxus
Station des Cultures Fruitières et
Maraichères
Centre de Recherches Agronomiques
de l'Etat
Chaussée de Charleroi 234
5800 Gembloux
BELGIUM

Dr. I. Kunev
Institute of Introduction & Plant
Genetic Resources "K. Malkov"
4122 Sadovo
Plovdiv
BULGARIA

Dr. M. Fischer
Academy of Agricultural Sciences
of the German Democratic Republic
Fruit Research Institute
Pillnitzer Platz 2
8057 Dresden-Pillnitz
GDR

APPENDIX II

AGENDA

1. Opening remarks
2. Election of Chairman
3. Adoption of Agenda
4. Review of the activities since the second meeting of the Working Group
 - 4.1 Documentation
 - 4.1.1 European Prunus crop catalogues (identification of gaps, inaccuracies and suggestions for improvements)
 - 4.1.2 Implementation of regional crop data bases
 - 4.2. Review of progress in collecting since last meeting
5. Formulation of a workplan for strengthening ongoing activities
 - 5.1 Strategies to ensure the continuous flow of information between Prunus data base(s) and Prunus Curators/breeders
 - 5.2 Registration of further data in data base(s)
 - 5.3 The need for conservation systems other than field genebanks (e.g. in vitro and seeds)
 - 5.4 Recommendations for further collecting including in vitro techniques
6. Recommendations for the implementation of a European conservation Prunus network
 - 6.1 Review of diverse existing structures for conservation in European countries (including safety duplication, long-term commitments from Governments for conservation, etc.)
 - 6.2 Minimal requirements for safe conservation of Prunus genetic resources
 - 6.3 Guidelines and recommendations for implementation of national conservation networks/a European conservation network
7. Transfer of vegetative material within and outside Europe
8. Collaboration of the European network with other regions of the world
9. Recommendations on coordination of the European Prunus network after the end of Phase III
10. Other matters
11. Writing of report
12. Consideration of report and approval by Working Group

LIST OF CROP COORDINATORS

Almond Coordinators

Dr. Ch. Grasselly
Station de Recherches Frutieres
Mediterranéennes
INRA
Domaine Saint-Paul
84140 Montfavet
FRANCE

Dr. I. Kunev
Institute of Introduction & Plant
Genetic Resources "K. Malkov"
4122 Sadovo
Plovdiv
BULGARIA

Apricot Coordinators

Prof. R. Spiegel-Roy
Institute of Horticulture
Volcani Center
P.O. Box 6
Bet-Dagan
ISRAEL

Ing. S. Kalasek
Ustredini Kontrolni Zksebni
Ustav Zemedelsky (UKZUZ)
64443 Zélisice u Brna
CZECHOSLOVAKIA

Cherry Coordinator

Prof. H. Schmidt
Federal Research Centre for
Horticultural Plant Breeding
Bornkampsweg
2070 Ahrensburg
FRG

Peach Coordinators

Ing. S. Kalasek
Ustredini Kontrolni Zksebni
Ustav Zemedelsky (UKZUZ)
64443 Zeleisice u Brna
CZECHOSLOVAKIA

Plum Coordinators

Prof. S.A. Paunovic
Agronomy Faculty
Department of Horticulture
University of Svetozar Markovic
Cara Dusana 34
32000 Cacak
YUGOSLAVIA

CROP TYPE AND PLANT USE

1. P. avium, P. cerasus,
P. avium x P. cerasus Sweet sour and duke cherries including cultivars, rootstocks, ornamental and wild
2. Other spp. and hybrids allied to cherry including Cerasus, Padus and Laurocerasus
3. P. armeniaca, P. mume,
P. armeniaca x P. mume Apricots incl. cultivars, rootstocks, ornamental and wild
4. P. amygdalus Almond incl. cultivars, rootstocks, ornamental and wild
5. P. persica Peach and nectarine incl. cultivars, rootstocks, ornamental and wild
6. P. domestica, P. insititia,
P. domestica x P. insititia European plum incl. cultivars, rootstocks, ornamental and wild
7. P. salicina, P. salicina derivatives
P. cerasifera, P. spinosa Japanese plums, myrobalans, sloes incl. cultivars, rootstocks, ornamental and wild
8. Other species

Plant Use*

- 0 = No use
- 1 = Clonal rootstock
- 2 = Clonal interstock
- 3 = Seedling rootstock
- 4 = Ornamental
- 5 = Pollinator
- 6 = Timber
- 7 = Virus indicator
- 8 = Botanical species
- 9 = Other

It is suggested that a clone may be assigned to more than one category if necessary, e.g. 4.7 = ornamental used as virus indicator, such as P. semilata 'Shirofugen'.

* Due to practical constraints this classification will not apply for crop catalogues to be published in August 1989 (see para. 11)

MINIMUM DESCRIPTION OF COLLECTIONS

Site

Latitude

Longitude

Elevation

Soil type

pH

Rainfalls per annum

Annual average temperature

Growing season (April–October) rainfalls (if possible monthly averages)

Growing season (April–October) temperatures (if possible monthly averages)

Number of winters with temperatures lower than -20°C

Year of planting (if collection planted at once)

Rootstock

Spacing

LIST OF REFERENCE VARIETIES

Virus free clones distributed by:

I Almonds

Cavaliera
Ardéchoise
Marcona
Tardy non pareil

Dr. Ch. Grasselly
Station de Recherches Frutieres
Mediterranéennes
INRA
Domaine Saint-Paul
84140 Montfavet
FRANCE

II Apricots

Cassino

Dr. Ch. Grasselly
Station de Recherches Frutieres
Mediterranéennes
INRA
Domaine Saint-Paul
84140 Montfavet
FRANCE

Luizet

Dr. M. Kellerhals
Swiss Federal Research Station
for Fruit-Growing
Viticulture & Horticulture
CH-8820 Wädenswil
SWITZERLAND

Hungarian Best

Dr. J. Apostol
Research Institute for Fruit &
Ornamental Plant Production
Pf. 108
XXII Park u. 2
1775 Budapest
HUNGARY

Wild apricots

Manicot
Haggit

Dr. Ch. Grasselly
Station de Recherches Frutieres
Mediterranéennes
INRA
Domaine Saint-Paul
84140 Montfavet
FRANCE

APPENDIX VI (continued)

III Cherries

Sweet cherries

Burlat

Mme. Dosba
Station de Recherches
d'Arboriculture Fruitière
INRA
Pont de la Maye
33140 Villenave d'Ornon
FRANCE

Van

Dr. J. Apostol
Research Institute for Fruit &
Ornamental Plant Production
Pf. 108
XXII Park u. 2
1775 Budapest
HUNGARY

Hedelfinger

Prof. H. Schmidt
Federal Research Centre for
Horticultural Plant Breeding
Bornkampsweg
2070 Ahrensburg
FRG

Wild diploid cherries

F 12/1

Dr. K.R. Tobutt
East Malling Research Station
Maidstone
Kent ME19 6BJ
UK

Sour cherries

Meteor Korai
Montmorency
Schattermorelle

Prof. H. Schmidt
Federal Research Centre for
Horticultural Plant Breeding
Bornkampsweg
2070 Ahrensburg
FRG

IV Peaches

Springtime
Redhaven

Mme. Dosba
Station de Recherches
d'Arboriculture Fruitière
INRA
Pont de la Maye
33140 Villenave d'Ornon
FRANCE

Babygold 7
Crethaven

Ing. S. Kalasek
Ustredini Kontrolni Zksebni
Ustav Zemedelsky (UKZUZ)
64443 Zélisice u Brna
CZECHOSLOVAKIA

APPENDIX VI (continued)

Wild peaches

Nomaguard
GF305
Yugoslavian selection 3328
Siberian C

Dr. Ch. Grasselly
Station de Recherches Frutieres
Mediterranéennes
INRA
Domaine Saint-Paul
84140 Montfavet
FRANCE

V Plums

Cultivated plums

Bonne de Bry
Reine claude 1380
Hakman

Mme. Dosba
Station de Recherches
d'Arboriculture Fruitière
INRA
Pont de la Maye
33140 Villenave d'Ornon
FRANCE

Stanley

Dr. K.R. Tobutt
East Malling Research Station
Maidstone
Kent ME19 6BJ
UK

Pozegaca

Prof. S.A. Paunovic
University of Svetozar Markovic
Faculty of Agronomy
Dept. of Horticulture
Cara Dusana 34
32000 Cacak
YUGOSLAVIA

Wild hexaploid plums

Brompton

Dr. K.R. Tobutt
East Malling Research Station
Maidstone
Kent ME19 6BJ
UK

S. Julian 655-2

Mme. Dosba
Station de Recherches
d'Arboriculture Fruitière
INRA
Pont de la Maye
33140 Villenave d'Ornon
FRANCE

APPENDIX VI (continued)

Japanese plums

Methley
Dr. Ch. Grasselly
Station de Recherches Frutieres
Mediterranéennes
INRA
Domaine Saint-Paul
84140 Montfavet
FRANCE

Shiro
Prof. R. Spiegel-Roy
Institute of Horticulture
Volcani Center
P.O. Box 6
Bet-Dagan

Friar
Dr. Ch. Grasselly
Station de Recherches Frutieres
Mediterranéennes
INRA
Domaine Saint-Paul
84140 Montfavet
FRANCE

Wild diploid plums

Myrabolan B
Dr. K.R. Tobutt
East Malling Research Station
Maidstone
Kent ME19 6BJ
UK

Pobieda
Dr. Ch. Grasselly
Station de Recherches Frutieres
Mediterranéennes
INRA
Domaine Saint-Paul
84140 Montfavet
FRANCE

THE EXISTING SITUATION IN EUROPE

Replies from 18 countries (Belgium, Bulgaria, Czechoslovakia, Denmark, Federal Republic of Germany, Finland, France, German Democratic Republic, Greece, Israel, Italy, Norway, Poland, Spain, Sweden, Switzerland, United Kingdom, Yugoslavia) were received to the questionnaires sent with the letters of invitation. In each of these countries fruit tree ex situ collections are kept in governmental institutes. In addition, in 5 of them private or semi-private associations also have a complementary role. (In FRG only, the role of botanic gardens as maintainers of collections was mentioned; in France national parks were cited.)

A Governmental law/decreed ensuring the long-term existence of the genetic resources collections exists in two countries (Poland and GDR), and in only 5 other countries the maintenance of these collections is officially recognized as a major responsibility by the institutes. For the remaining 11 countries, it appeared that costs of maintenance of the collections are not really recognized in the institutes' budget or at least not planned in the long term (with the exception of Israel, where maintenance depends on contributions from fruit industry). It seems that genetic resources collections are not specifically maintained as such but included within variety evaluation trials or breeding fields

In fact, in 8 countries the actual maintenance of the collections is mainly due to the interest/goodwill of a few persons and their retirement from employment or other factors may change the situation. Simultaneously, insufficient funding is threatening the maintenance efforts in 5 of these 8 countries, whereas in 3 countries, where funding seems to be adequate for the time being, cuts in the budget will most probably affect the collections first. The absence of national coordination between different initiatives was also considered as an obstacle.

APPENDIX VII (continued)

Only 4 countries have a systematic policy of duplicating their accessions, i.e. keeping them in two locations (2-4 trees/locations). In 4 countries accessions are kept as a general rule only in one location (from 2 to 5 trees and sometimes only one). In the remaining 10 countries, the number of locations depends on the Institutes holding the collections or may vary following species, but to summarize it appears that the conservation of accessions in one single location is more a general practice than an exception.

Only 3 questionnaires mentioned the spread of disease as a threat to mid/long-term maintenance of fruit tree genetic resources (some collections were destroyed in an attempt to eradicate Sharka). Poland and Czechoslovakia suffer cold winters; in Poland the collections are replanted every 10 years, as they observed that young trees are more resistant to low temperatures than old fruiting trees.

Currently the in vitro storage of material seems to be practised only for wild Prunus avium as forest trees (INRA, France). Spain is planning to implement this practice for Citrus, Czechoslovakia for subsets of the germplasm and GDR for varieties registered in the official variety list. In vitro storage is also envisaged in Yugoslavia and FRG, but no details were provided.

To finish this overview with an encouraging note, the implementation of a new law in favour of in situ and ex situ conservation is under discussion in Greece, whereas national programmes for conservation of fruit trees are envisaged in Spain and Yugoslavia.

LIST OF NOMINATED NATIONAL FRUIT TREE GERMPLASM LIAISON OFFICERS

Dr. R. Trefois
Station des Cultures Fruitières
et Maraichères
Centre de Recherches Agronomiques
de l'Etat
Chaussée de Charleroi 234
B-5800 Gembloux
BELGIUM

Dr. I. Kunev
Institute of Introduction & Plant
Genetic Resources "K. Malkov"
4122 Sadovo
Plovdiv
BULGARIA

Dr. J. Blazek
Research Institute for Fruit
Growing and Breeding
507 51 Holovousy
CZECHOSLOVAKIA

Dr. M. Fischer
Academy of Agricultural Sciences
of the German Democratic Republic
Fruit Research Institute
Pillnitzer Platz 2
8057 Dresden-Pillnitz
DDR

Prof. R. Bernhard
Station de Recherches d'Arboriculture
Fruitières
INRA
La Grande-Ferrade
Pont-de-la-Maye
33140 Villenave d'Ornon
FRANCE

Dr. I. Hatziharisis
Pomology Institute
Imathias
59200 Naoussa
GREECE

Dr. J. Apostol
Research Institute for Fruit &
Ornamental Plant Production
Pf. 108
XXII Park u. 2
1775 Budapest
HUNGARY

Assistant Prof. Dr. Z.S. Grzyb
Research Institute of Pomology and
Floriculture
Ul. Pomologiczna 18
96-100 Skierniewice
POLAND

Dr. R. Socias i Company
Diputación General de Aragón
SIA
Unidad de Fruticultura
Apartado 727
50080 Zaragoza
SPAIN

Dr. M. Kellerhals
Swiss Federal Research Station
for Fruit-Growing,
Viticulture & Horticulture
CH-8820 Wädenswil
SWITZERLAND

Prof. S.A. Paunovic
University of Svetozar Markovic
Faculty of Agronomy
Dept. of Horticulture
Cara Dusana 34
32000 Cacak
YUGOSLAVIA